

CLAIMS

Having thus described our invention in detail, what we claim as new and desire to secure by the Letters PATENT is:

- 5 1. A cured, non-woven mat comprising a mixture of fibers having different fiber lengths, said fibers containing a polysiloxane compound, and fixedly distributed in a binder.

- 10 2. The cured, non-woven mat of Claim 1 wherein from about 0 to about 100 weight % of said fibers have a fiber length of from about 0.5 to about 60 mm, and from about 0 to about 100 weight % of said fibers have a fiber length of from about 10 to about 150 mm.

- 15 3. The cured, non-woven mat of Claim 2 wherein from about 20 to about 80 weight % of said fibers have a fiber length of from about 10 to about 45 mm, and from about 20 to about 80 weight % of said fibers have a fiber length of from about 30 to about 80 mm.

- 20 4. The cured, non-woven mat of Claim 1 wherein said fibers comprise fibers of glass, wood, polyethylene, polypropylene, polyester, Nylon®, Orlon® or mixtures thereof.

- 25 5. The cured, non-woven mat of Claim 4 wherein said fibers are glass fibers having an average diameter of from about 1 to about 100 µm.

- 30 6. The cured, non-woven mat of Claim 1 wherein said fibers are present in an amount of from about 50 to about 95 weight %, said polysiloxane is present in an amount of from about 0.001 to about 20 weight % and said binder is present in an amount of from about 5 to about 50 weight %.

- 35 7. The cured, non-woven mat of Claim 6 wherein said fibers are present in an amount of from about 65 to about 90 weight %, said polysiloxane is present in an

amount of from about 0.01 to about 10 weight % and said binder is present in an amount of from about 10 to about 35 weight %.

8. The cured, non-woven mat of Claim 1 wherein said binder is formaldehyde type
5 binder containing between about 0.1 and about 20 weight % of a crosslinked styrene/(meth)acrylic polymer binder modifier.
9. The cured, non-woven mat of Claim 8 wherein said formaldehyde type binder comprises formaldehyde and a compound selected from the group consisting of
10 urea, phenol, resorcinol, melamine and mixtures thereof.
10. The cured, non-woven mat of Claim 9 wherein said compound is urea.
11. The cured, non-woven mat of Claim 8 where the styrene/(meth)acrylic polymer
15 is crosslinked with a polyfunctional nitrogen-containing crosslinking agent.
12. The cured, non-woven mat of Claim 1 wherein said polysiloxane is a polyalkylsiloxane.
- 20 13. The cured, non-woven mat of Claim 12 wherein said polyalkylsiloxane is polydimethylsiloxane.
14. The cured, non-woven mat of Claim 1 wherein said mat is a roofing material and is coated on at least one surface with asphalt.
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15. The cured, non-woven mat of Claim 1 wherein said mat is a glass mat employed in a roofing shingle.
16. An asphalt coated roofing material comprising a cured non-woven mat that
30 comprises a mixture of fibers having different fiber lengths, said fibers containing a polysiloxane compound, and fixedly distributed in a binder.

17. The asphalt coated roofing material of Claim 16 wherein from about 0 to about 100 weight % of said fibers have a fiber length of from about 0.5 to about 60 mm, and from about 0 to about 100 weight % of said fibers have a fiber length of from about 10 to about 150 mm.

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18. The asphalt coated roofing material of Claim 16 wherein said fibers comprise fibers of glass, wood, polyethylene, polypropylene, polyester, Nylon®, Orlon® or mixtures thereof.

10 19. The asphalt coated roofing material of Claim 18 wherein said fibers are glass fibers having an average diameter of from about 1 to about 100 µm.

15 20. The asphalt coated roofing material of Claim 16 wherein said fibers are present in an amount of from about 50 to about 95 weight %, said polysiloxane is present in an amount of from about 0.001 to about 20 weight % and said binder is present in an amount of from about 5 to about 50 weight %.

21. The asphalt coated roofing material of Claim 16 wherein said binder is formaldehyde type binder containing between about 0.1 and about 20 weight % of a crosslinked styrene/(meth)acrylic polymer binder modifier.

22. The asphalt coated roofing material of Claim 21 wherein said formaldehyde type binder comprises formaldehyde and a compound selected from the group consisting of urea, phenol, resorcinol, melamine and mixtures thereof.

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23. The asphalt coated roofing material of Claim 22 wherein said compound is urea.

24. The asphalt coated roofing material of Claim 21 where the styrene/(meth)acrylic polymer is crosslinked with a polyfunctional nitrogen-containing crosslinking agent.

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25. The asphalt coated roofing material of Claim 16 wherein said polysiloxane is a polyalkylsiloxane.

26. The asphalt coated roofing material of Claim 25 wherein said polyalkylsiloxane is polydimethylsiloxane.
- 5 27. The asphalt coating roofing material of Claim 16 wherein said fibers are glass fibers.
28. The asphalt coated roofing material of Claim 16 wherein said material is a shingle.
- 10 29. The asphalt coated roofing material of Claim 16 wherein said material is a sheet or roll.